On April 26, President Bush told the American Association of Community Colleges Annual Convention in Minneapolis: "There needs to be technical standards to make possible new broadband technologies, such as the use of high-speed communication directly over power lines. Power lines were for electricity; power lines can be used for broadband technology. So the technical standards need to be changed to encourage that."

Mr. Bush is wrong. Using power lines to distribute broadband services (called Broadband over Power Lines, or BPL) is a bad idea that should not be encouraged. As a federally licensed Amateur Radio operator who has passed a Federal Communications Commission (FCC) examination in radio communication technology, and, also, as a Registered Professional Engineer in the State of Minnesota with over 35 years of power utility distribution system engineering experience, I suggest I am qualified to tell you why.

Power lines were designed to transmit electrical energy. They were not designed to transmit broadband signals, which is fact are radio-frequency (RF) signals. When a broadband signal is put on a power line, much of the RF energy leaks off the line and radiates, causing interference to nearby radio receivers. Interference has been documented at test sites throughout the country and overseas where BPL is in operation.

Additionally, poorly maintained power lines, similar to the types touted by President Bush being able to "… be used for broadband technology ..." are currently a source of interference to both radio and television receivers used by millions of customers. The on-going dispute between customers of American Electric Power and the utility itself to see an example of how poorly maintained power lines cause significant radio and television interference. The Enforcement Division of the FCC has had to become involved as the utility is unwilling to provide the resources necessary to resolve the interference problem.

Based on my 35 years of experience as a Power Distribution Engineer with Northern States Power, I personally experienced the reluctance of utility management to provide the required resources to investigate and resolve interference problems as, simply stated, they do not feel such action is either necessary or cost-effective, even though they are legally required to mitigate all problems of interference caused by utility-owned power equipment. Based on my experiences, I feel utility management will not be responsive to future problems of utility-caused interference issues.

The nation's 680,000 radio amateurs are especially concerned about this interference because it affects the short waves -- a unique portion of the radio spectrum that supports long-distance, intercontinental radio communication. Licensed radio amateurs use these frequencies for hurricane reporting, disaster and emergency relief, and many other purposes in accordance with FCC regulations. The Amateur Radio Service is the only 100% failsafe emergency communications capability in the world. No matter what happens, radio amateurs will be able to communicate with one another without having to rely on the expensive and vulnerable infrastructure -- but we cannot maintain our emergency networks if BPL is deployed and interferes with the weak radio signals we are trying to hear.

In addition to amateur operation, the short waves are used for international broadcasting, aeronautical, maritime, and other services including the military. Depending on the frequencies in use, BPL interference also could wipe out radio communication for many of our nation's First Responders -- police, fire, and emergency medical personnel -- who use low-band VHF radios operating in the 30-50 megahertz (MHz) range.

Radio amateur's support expanded broadband services to consumers at lower cost. Indeed, they tend to be early adopters of new technology. However, there are ways to deliver broadband that do not pollute the radio spectrum as BPL does. These include fiber-to-the-home, cable, DSL, and Broadband Wireless Access. None of these technologies causes interference to short wave radio.

BPL is sometimes touted as a solution for rural areas. It is not. A BPL signal only carries a few thousand feet down a power line and then must be repeated. This requires a lot of hardware and will not be economic in areas with low population densities.

The FCC recognizes the interference potential of BPL and is in the midst of a rulemaking proceeding, ET Docket No. 04-37, that proposes new requirements and measurement guidelines for BPL systems. However, the FCC proposals do not go nearly far enough to protect over-the-air radio communication services.

In short, BPL has a major disadvantage that is not shared by other broadband technologies and that outweighs whatever benefit it may offer. National broadband telecommunications policy should not include support for BPL, but should focus on other, more appropriate technologies.

Now we are hearing arguments from utility legal personnel in North Carolina that BPL interference to amateur radio really isn't a problem because the mobile operator is in proximity to power lines for only a short period of time. I don't believe it is appropriate that a generator of interference dictate how a perceived problem really doesn't exist to the party being interfered with. Not only does the comment show the utilities know of the potential problem, but are unwilling to do anything required by present FCC rules to mitigate the problem. Also, I would challenge the technical credibility of the comments as the individual making them is not a Registered Professional Engineer.

By encouraging broadband over power lines, the FCC is heading in the wrong direction. I urge you to ignore the comments made proclaiming significant benefit, and, instead, concentrate on the problems that BPL will cause to millions of legally licensed radio communicators and radio spectrum users.

Respectfully,

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